

Serial No. 10/042,894  
Amendment dated 04/12/2005  
Reply to Office Action of 12/29/2004

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An isolated nucleic acid comprising a member selected from the group consisting of:
  - (a) ~~a polynucleotide having at least 80% sequence identity compared to the full length of the sequence of SEQ ID NO: 7; wherein the % sequence identity is determined by GAP 10 analysis using default parameters and wherein the polynucleotide has IPPK activity; and a polynucleotide encoding the polypeptide of SEQ ID NO:8 wherein the polypeptide has IPPK activity;~~
  - (b) ~~a polynucleotide having the sequence set forth in SEQ ID NO: 7; and~~
  - (b)(c) ~~a polynucleotide, which is complementary to a polynucleotide of (a) or (b).~~
2. (Cancelled)
3. (Original) A vector comprising at least one nucleic acid of claim 1.
4. (Previously Presented) An expression cassette comprising at least one nucleic acid of claim 1 operably linked to a promoter.
5. (Cancelled)

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6. (Previously Presented) A non-human host cell containing at least one nucleic acid of claim 1.
7. (Original) The host cell of claim 6 that is a plant cell.
8. (Previously Presented) A transgenic plant comprising at least one nucleic acid of claim 1.
9. (Original) The transgenic plant of claim 8, wherein the plant is corn, soybean, sorghum, wheat, rice, alfalfa, safflower, sunflower, canola, cotton, or turf grass.
10. (Previously Presented) A transgenic seed comprising at least one nucleic acid of claim 1.
11. (Previously Presented) A transgenic seed of claim 10, wherein the seed is from corn, soybean, sorghum, wheat, rice, alfalfa, safflower, sunflower, canola, cotton, or turf grass.
- 12-13. (Cancelled)
14. (Previously Presented) A method for modulating inositol polyphosphate kinase (IPPK) activity or levels in a plant cell, comprising:
  - (a) transforming a plant cell with at least one nucleic acid of claim 1;
  - (b) growing the transformed plant cell under conditions sufficient to modulate IPPK activity in the plant cell.

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15. (Previously Presented) The method of claim 14 further comprising regenerating a plant from the transformed plant cell.
16. (Original) The method of claim 15, wherein the plant cell is from a monocot or a dicot.
17. (Previously Presented) A transgenic plant produced by the method of claim 15.
18. (Original) The transgenic plant of claim 17, wherein the plant is corn, soybean, sorghum, wheat, rice, alfalfa, safflower, sunflower, canola, cotton, or turf grass.
19. (Currently Amended) The method of claim 15 wherein of phytate is reduced.
20. (Currently Amended) The method of claim 15 wherein of non-phytate phosphorous is increased.
21. (Previously Presented) A method of decreasing the level of phosphorous in non-ruminant animal waste comprising providing animal feed from a plant produced by the method of claim 19.

22-68. (Cancelled)